

Water-Data Report 2007

11501000 SPRAGUE RIVER NEAR CHILOQUIN, OR

Klamath Basin
Sprague Subbasin

LOCATION.--Lat 42°35'05", long 121°50'55" referenced to North American Datum of 1927, in NE ¼ NW ¼ sec.35, T.34 S., R.7 E., Klamath County, OR, Hydrologic Unit 18010202, on right bank, 1.0 mi northeast of Chiloquin, 4.6 mi upstream from Modoc Point Canal intake and at mile 5.4.

DRAINAGE AREA.--1,565 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--July to October 1920, March 1921 to current year. Monthly discharge only July 1920, published in WSP 1315-B. Prior to October 1931, published as "at McCready Ranch, near Chiloquin."

REVISED RECORDS.--WSP 591: 1922(M). WSP 1011: 1943(M). WSP 1565: 1921-22.

GAGE.--Water-stage recorder. Datum of gage is 4,202.43 ft above NGVD of 1929. Prior to Oct. 1, 1931, nonrecording gage at site 12 mi upstream at different datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Minor regulation from irrigation diversions upstream from station.

AVERAGE DISCHARGE FOR PERIOD OF RECORD.--86 years (water years 1922-2007), 580 ft³/s, 420,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,900 ft³/s Dec. 26, 1964, gage height, 10.37 ft; minimum daily discharge, 50 ft³/s May 26, 1926.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,680 ft³/s Mar. 16, 17, gage height, 3.81 ft; minimum discharge, 81 ft³/s Aug. 1-3.

11501000 SPRAGUE RIVER NEAR CHILOQUIN, OR—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007
DAILY MEAN VALUES

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	250	299	352	384	326	496	920	756	373	181	86	121
2	250	300	329	409	327	477	891	785	350	179	85	132
3	241	304	407	402	315	469	874	801	347	165	93	133
4	246	314	378	453	315	469	846	836	342	147	88	111
5	266	318	344	495	330	510	812	869	347	149	89	109
6	284	328	330	516	332	646	794	870	347	154	92	120
7	291	324	336	438	338	862	801	866	366	156	93	114
8	291	325	345	402	368	1,050	814	824	395	168	99	120
9	290	326	332	397	416	1,240	843	778	389	177	110	129
10	285	333	341	390	506	1,370	883	745	350	164	108	123
11	285	338	357	384	623	1,440	932	734	321	153	111	124
12	278	332	385	370	823	1,430	959	728	317	145	113	125
13	283	348	422	e370	1,050	1,420	940	694	349	134	115	127
14	285	362	515	e370	1,070	1,470	943	677	329	139	114	124
15	287	368	650	e370	764	1,580	928	667	285	146	109	119
16	285	397	871	e370	637	1,650	920	642	272	136	107	115
17	286	392	923	e370	650	1,640	948	609	266	139	100	121
18	292	393	646	e370	750	1,500	934	578	256	142	100	125
19	295	396	539	e370	809	1,350	906	545	259	146	102	139
20	312	386	579	e360	775	1,280	877	529	254	133	101	155
21	308	374	438	e360	706	1,230	838	523	234	144	106	164
22	303	371	424	e360	680	1,200	819	518	227	145	116	168
23	301	391	436	e360	623	1,210	806	523	213	140	117	179
24	296	381	428	e360	583	1,150	822	505	200	141	106	178
25	294	377	409	356	566	1,070	850	478	207	140	102	184
26	294	373	414	351	581	1,040	826	442	210	131	101	195
27	295	370	448	335	562	1,040	791	422	197	117	103	180
28	294	365	472	332	529	1,040	766	413	190	105	102	185
29	299	355	474	333	---	1,060	743	407	179	93	96	191
30	300	356	400	327	---	1,040	737	403	173	87	95	202
31	300	---	372	324	---	967	---	396	---	90	106	---
Total	8,866	10,596	14,096	11,788	16,354	34,396	25,763	19,563	8,544	4,386	3,165	4,312
Mean	286	353	455	380	584	1,110	859	631	285	141	102	144
Max	312	397	923	516	1,070	1,650	959	870	395	181	117	202
Min	241	299	329	324	315	469	737	396	173	87	85	109
Ac-ft	17,590	21,020	27,960	23,380	32,440	68,220	51,100	38,800	16,950	8,700	6,280	8,550

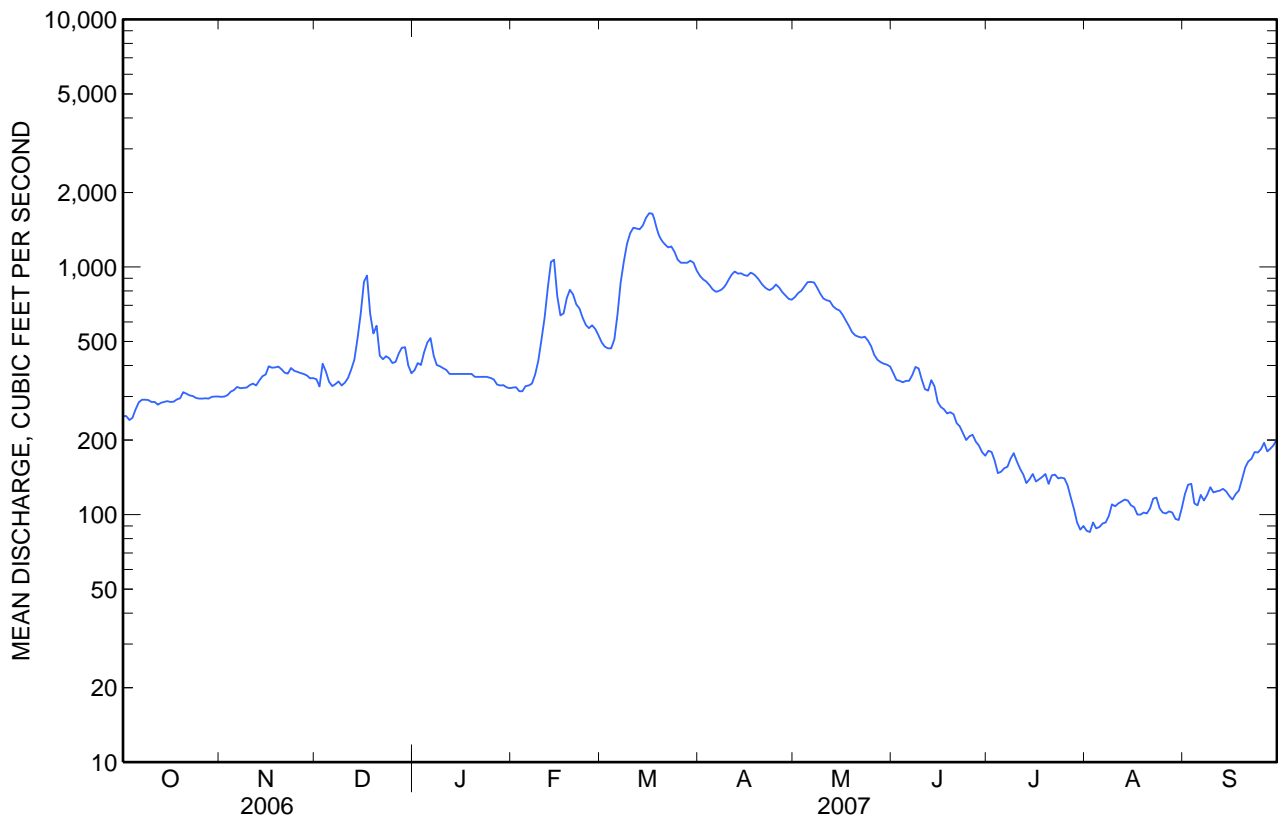
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2007, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	291	341	467	549	687	930	1,259	1,141	599	272	210	230
Max	848	789	2,853	3,017	2,877	2,904	4,250	3,211	1,762	560	405	374
(WY)	(1963)	(1974)	(1965)	(1997)	(1996)	(1972)	(1956)	(1956)	(1983)	(1983)	(1956)	(1956)
Min	183	218	215	196	223	286	263	119	93.8	85.1	76.9	121
(WY)	(1934)	(1995)	(1933)	(1937)	(1933)	(1992)	(1977)	(1992)	(1992)	(1994)	(1992)	(2003)

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SUMMARY STATISTICS

	Calendar Year 2006		Water Year 2007		Water Years 1922 - 2007	
Annual total	339,338		161,829			
Annual mean	930		443		580	
Highest annual mean					1,395	1956
Lowest annual mean					199	1992
Highest daily mean	3,350	Jan 4	1,650	Mar 16	14,500	Dec 26, 1964
Lowest daily mean	188	Aug 27	85	Aug 2	50	May 26, 1926
Annual seven-day minimum	194	Aug 22	88	Jul 30	65	Aug 5, 1992
Annual runoff (ac-ft)	673,100		321,000		420,500	
10 percent exceeds	2,480		912		1,300	
50 percent exceeds	448		352		345	
90 percent exceeds	229		115		195	



11501000 SPRAGUE RIVER NEAR CHILOQUIN, OR—Continued**WATER-QUALITY RECORDS**

PERIOD OF RECORD.--

WATER TEMPERATURE: April 2005 to current year.

INSTRUMENTATION.--Temperature recorder.

REMARKS.--

WATER TEMPERATURE: Records good except for period Nov. 1 to Mar. 31, which are poor.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum, 28.7°C July 5, 2007; minimum, 0.0°C on many days during November 2006 to January 2007.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 28.7°C July 5; minimum, 0.0°C on many days during November to January.

**TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007**

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	October			November			December			January		
1	15.2	12.4	13.6	4.4	2.9	3.7	1.8	0.3	0.8	1.1	0.5	0.7
2	14.5	12.1	13.2	5.0	3.8	4.4	0.4	0.0	0.1	1.5	0.6	1.1
3	14.2	12.1	13.1	5.8	5.0	5.4	0.2	0.0	0.0	1.7	1.2	1.5
4	13.4	11.7	12.5	6.8	5.8	6.3	0.1	0.0	0.0	1.5	0.9	1.2
5	13.0	11.0	11.9	8.5	6.8	7.7	0.7	0.0	0.2	1.0	0.0	0.5
6	13.6	11.4	12.3	9.7	8.2	8.9	1.1	0.1	0.4	1.5	0.8	1.2
7	13.1	10.4	11.6	10.9	9.4	10.2	1.1	0.0	0.5	2.1	1.2	1.6
8	13.0	10.0	11.3	10.8	9.3	10	1.4	0.6	1.0	2.4	1.8	2.0
9	13.2	10.9	11.7	9.3	7.3	8.5	2.6	0.9	1.7	2.6	1.7	2.1
10	12.4	9.8	10.9	7.3	6.2	6.6	2.9	2.0	2.4	2.3	1.3	2.0
11	12.2	9.2	10.5	6.6	5.4	5.8	2.7	1.9	2.3	1.3	0.0	0.5
12	12.2	9.2	10.5	5.4	3.0	4.3	4.1	2.5	3.3	0.1	0.0	0.0
13	12.3	9.3	10.6	3.6	2.9	3.3	4.8	4.1	4.6	0.1	0.0	0.0
14	12.2	9.4	10.7	4.0	2.9	3.3	5.6	4.8	5.1	0.1	0.0	0.0
15	10.7	9.8	10.4	3.4	2.5	3.0	5.5	3.6	4.5	0.1	0.0	0.0
16	9.9	9.0	9.4	5.1	3.4	4.2	3.6	1.7	2.5	0.0	0.0	0.0
17	9.9	8.0	8.8	5.0	4.1	4.5	1.7	0.2	0.7	0.1	0.0	0.0
18	9.9	7.8	8.8	5.6	3.9	4.7	0.5	0.0	0.1	0.1	0.0	0.0
19	11.3	8.8	9.9	6.2	4.8	5.4	0.0	0.0	0.0	0.1	0.0	0.0
20	11.5	9.4	10.2	7.6	6.2	7.0	0.0	0.0	0.0	0.1	0.0	0.0
21	10.4	8.3	9.3	7.3	6.2	6.7	1.3	0.0	0.7	0.1	0.0	0.0
22	10.0	7.5	8.6	6.5	5.5	6.0	0.8	0.3	0.5	0.1	0.0	0.0
23	9.9	7.5	8.6	5.6	4.8	5.1	1.7	0.8	1.3	0.1	0.0	0.0
24	9.8	7.6	8.5	5.2	4.3	4.8	1.4	1.0	1.2	0.1	0.0	0.0
25	8.4	6.4	7.3	4.6	3.9	4.2	2.3	1.4	2.0	0.5	0.1	0.2
26	7.8	5.7	6.6	4.1	2.6	3.4	3.0	2.2	2.7	1.4	0.3	0.7
27	7.8	5.4	6.4	2.6	1.2	2.1	2.8	1.6	2.3	1.9	0.5	0.9
28	7.7	5.4	6.4	1.7	0.5	1.0	1.6	0.3	0.7	1.5	0.0	0.6
29	7.5	5.3	6.2	0.5	0.0	0.1	0.4	0.0	0.1	1.6	0.0	0.6
30	6.8	4.9	5.7	0.7	0.0	0.3	0.9	0.0	0.3	2.2	0.3	1.0
31	5.3	3.8	4.5	---	---	---	1.7	0.6	1.1	2.0	0.3	0.9
Month	15.2	3.8	9.7	10.9	0.0	5.0	5.6	0.0	1.4	2.6	0.0	0.6

11501000 SPRAGUE RIVER NEAR CHILOQUIN, OR—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	February			March			April			May		
1	1.9	0.1	0.7	3.1	1.8	2.5	10.8	8.9	9.8	17.1	14.3	15.1
2	1.7	0.1	0.7	4.3	3.1	3.8	10.6	8.0	9.5	14.4	12.2	13.3
3	2.5	0.8	1.5	6.1	4.0	4.9	11.1	8.8	10	12.6	10.6	11.6
4	3.3	1.3	2.1	7.1	5.2	6.0	11.9	9.3	10.6	11.7	10.2	10.9
5	3.4	2.1	2.5	7.4	6.7	6.9	13.2	9.8	11.6	12.1	8.7	10.5
6	4.1	1.8	2.8	8.3	6.3	7.3	14.4	11.1	12.8	13.3	9.9	11.7
7	5.0	3.8	4.3	8.3	6.8	7.3	14.3	12.5	13.5	15.7	11.6	13.7
8	5.1	4.1	4.6	7.1	5.0	6.2	13.9	11.6	13.0	17.5	13.5	15.5
9	5.8	4.4	5.0	6.4	5.1	5.5	13.7	10.9	12.1	18.5	15.5	17.2
10	5.2	4.9	5.0	6.5	4.8	5.6	12.3	9.8	11.2	19.3	17.1	18.3
11	5.1	4.4	4.8	8.1	5.5	6.7	11.7	9.4	10.2	19.2	17.3	18.3
12	4.4	3.8	4.2	9.3	6.8	8.0	10.0	7.7	8.9	18.9	17.0	18.0
13	3.8	2.7	3.3	10.0	7.7	8.9	11.1	7.6	9.3	17.9	15.5	16.9
14	3.2	1.7	2.6	9.4	7.6	8.6	10.9	8.9	9.7	17.7	15.4	16.8
15	5.4	3.0	3.9	9.4	7.1	8.3	11.0	8.1	9.6	18.3	16.0	17.3
16	6.1	5.2	5.6	10.3	7.6	9.0	11.7	8.6	10.2	19.4	17.3	18.4
17	6.6	5.3	6.0	11.1	8.4	9.8	11.7	9.8	10.9	19.7	17.7	18.7
18	6.7	5.6	6.3	11.8	9.3	10.6	10.8	8.2	9.5	19.7	17.7	18.8
19	6.5	4.6	5.3	11.5	9.8	10.7	9.6	7.8	8.4	18.9	17.6	18.3
20	5.5	4.0	4.4	11.3	9.8	10.6	9.8	7.0	8.4	17.6	16.0	16.8
21	4.3	2.6	3.2	10.4	8.2	9.4	9.6	7.8	8.4	17.2	14.6	15.9
22	3.0	2.4	2.8	10.2	7.9	9.2	9.3	7.4	8.3	16.7	14.4	15.6
23	3.1	2.1	2.6	10.8	8.1	9.5	11.3	7.5	9.3	17.2	14.8	16.0
24	3.4	2.7	3.0	11.4	8.8	10.2	12.9	9.8	11.4	19.0	16.2	17.5
25	3.3	2.5	3.0	11.0	9.4	10.2	14.0	11.2	12.6	19.0	17.2	18.1
26	3.0	2.4	2.7	10.7	8.8	9.5	14.7	11.6	13.3	20.4	17.2	18.8
27	2.5	2.4	2.4	8.8	6.9	7.5	16.1	12.5	14.4	21.0	18.5	19.4
28	2.4	2.1	2.2	7.6	5.1	6.5	17.0	13.9	15.7	19.9	16.7	18.3
29	---	---	---	8.3	5.2	6.8	17.3	15.1	16.4	20.7	17.0	18.8
30	---	---	---	9.9	6.4	8.1	17.5	15.0	16.5	21.8	17.6	19.7
31	---	---	---	11.2	8.1	9.6	---	---	---	23.0	19.2	21.0
Month	6.7	0.1	3.5	11.8	1.8	7.9	17.5	7.0	11.2	23.0	8.7	16.6

11501000 SPRAGUE RIVER NEAR CHILOQUIN, OR—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	June			July			August			September		
1	24.0	20.2	21.9	24.4	19.3	21.6	27.1	20.5	23.7	23.1	18.5	20.6
2	23.9	20.8	22.3	25.0	20.7	22.5	27.2	21.6	24.2	22.6	17.9	20.0
3	24.0	20.5	22.2	25.9	20.2	22.8	26.5	20.8	23.5	22.3	17.8	19.7
4	22.6	20.8	21.8	27.5	21.0	24.0	25.7	19.8	22.6	20.2	17.4	18.6
5	20.8	17.5	19.2	28.7	22.5	25.4	24.4	19.0	21.5	20.3	15.3	17.5
6	18.1	15.7	16.8	27.7	23.6	25.6	23.9	18.5	21.0	20.7	15.3	17.7
7	18.0	14.6	16.3	28.2	23.4	25.5	23.5	17.5	20.4	21.5	16.1	18.5
8	19.7	15.8	17.6	27.6	22.4	24.8	23.8	17.4	20.4	20.9	16.2	18.3
9	18.5	16.9	17.7	27.7	22.9	25.1	23.6	18.0	20.6	20.2	15.6	17.6
10	19.5	16.8	17.9	27.7	23.2	25.2	23.7	17.7	20.4	19.8	14.6	16.9
11	20.0	16.3	18.0	26.7	23.8	24.9	23.5	17.7	20.3	19.8	14.5	16.9
12	21.0	16.8	18.8	26.5	22.6	24.3	23.2	17.8	20.3	19.8	15.1	17.3
13	21.8	18.3	19.9	26.5	20.9	23.5	23.1	17.4	20.0	19.6	15.4	17.3
14	22.4	18.8	20.5	26.6	21.6	23.8	23.2	17.4	20.1	18.6	15.6	16.8
15	23.1	19.1	21.0	26.5	21.9	23.9	23.5	17.3	20.2	18.3	14.1	16.0
16	23.0	20.0	21.3	26.5	21.5	23.7	23.5	18.0	20.4	17.5	13.8	15.5
17	22.1	18.6	20.2	23.4	21.4	22.4	22.9	17.4	19.9	18.0	14.0	15.6
18	22.9	18.7	20.6	22.0	19.8	20.9	21.8	16.5	19.1	17.4	13.6	15.1
19	23.7	19.7	21.5	22.4	18.4	20.2	21.1	17.6	19.0	14.4	11.9	13.0
20	24.0	20.6	22.2	22.0	17.9	19.8	20.9	16.3	18.4	14.3	10.6	12.2
21	24.4	20.8	22.4	23.9	19.5	21.5	23.0	17.7	19.9	15.9	11.6	13.4
22	23.7	20.5	21.9	25.4	20.2	22.5	24.0	18.3	20.8	15.6	12.7	13.8
23	23.0	19.4	21.0	26.8	21.5	23.8	23.7	18.4	20.8	14.8	12.1	13.2
24	22.0	17.9	19.7	27.0	21.8	24.1	24.0	18.0	20.7	14.3	11.1	12.4
25	22.0	17.1	19.4	27.1	22.0	24.3	23.8	18.1	20.7	14.1	10.7	12.1
26	22.6	17.7	20.0	27.4	22.3	24.6	23.1	17.8	20.3	14.6	11.0	12.5
27	23.7	19.0	21.1	27.6	22.1	24.6	22.9	17.3	19.8	14.8	11.4	12.8
28	23.0	19.5	21.3	27.6	21.8	24.4	23.2	17.1	19.8	12.8	10.6	12.1
29	23.6	20.2	21.6	27.1	21.1	24.0	22.8	17.2	20.0	11.8	8.9	10.2
30	23.9	18.8	21.1	27.1	20.8	23.7	23.0	18.5	20.8	10.5	10.0	10.2
31	---	---	---	27.1	20.8	23.7	24.1	19.2	21.3	---	---	---
Month	24.4	14.6	20.2	28.7	17.9	23.6	27.2	16.3	20.7	23.1	8.9	15.5

	Max	Min	Mean
Year	28.7	0.0	11.4